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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,183	10/31/2003	Jean Luc Sibiet	A01460	9914
21898	7590	11/03/2005	EXAMINER	
ROHM AND HAAS COMPANY PATENT DEPARTMENT 100 INDEPENDENCE MALL WEST PHILADELPHIA, PA 19106-2399			KINNEY, ANNA L	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/698,183	Applicant(s) SIBIET ET AL.	
	Examiner Anna Kinney	Art Unit 1731	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/18/04 & 3/24/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites percentage limitations, but does not recite a weight or volume basis. The Examiner suggests that the applicant clarify this claim by providing the basis for the limitations.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Mansson (U.S. Patent 4,919,755).

With respect to claim 1, Mansson discloses a method for brightening virgin mechanical pulp (col. 1, lines 4-18); said method comprising combining: (i) an aqueous solution comprising sodium borohydride and sodium hydroxide (col. 1, lines 46-52 and col. 2, lines 43-49); and (ii) an aqueous solution comprising sodium bisulfite (col. 3, lines 21-35), in a chemical mixer (col. 3, lines 47-50) and adding output of the chemical mixer

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to an aqueous slurry of virgin mechanical pulp (col. 4, lines 5-12); wherein a ratio of (moles bisulfite-moles hydroxide)/moles borohydride is from 4.9 to 19.8 (col. 1, lines 46-52 and col. 3, lines 38-47), which contains one specific point within the claimed range of 0 to 7.8.

With respect to claim 2, Mansson discloses that the ratio is from 4.9 to 19.8 (col. 1, lines 46-52 and col. 3, lines 38-47), which contains one specific point within the claimed range of 4 to 7.5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mansson.

With respect to claims 3 and 5, Mansson does not disclose expressly the time interval from mixing the chemicals to addition to the pulp. However, Mansson does disclose that dithionite solution is unstable (col. 1, lines 25-29), and that this disadvantage has resulted in an importance of in-situ preparation (col. 1, lines 40-43). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the mixed chemicals to the pulp as soon as possible after mixing to obtain the invention as specified in claims 3 and 5. The motivation would have been to reduce the losses of active substance (col. 1, lines 25-29).

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With respect to claim 4, Mansson discloses that the ratio is from 4.9 to 19.8 (col. 1, lines 46-52 and col. 3, lines 38-47), which encompasses the claimed range of 5 to 7 for claim 4.

With respect to claim 6, Mansson does not disclose expressly that the output of the chemical mixer is substantially homogeneous prior to addition to the pulp slurry. At the time of the invention, however, it would have been obvious to a person of ordinary skill in the art to mix the chemicals well (i.e., until substantially homogeneous). The motivation would have been to obtain as complete reaction as possible (col. 3, lines 38-44).

With respect to claim 7, Mansson does not disclose expressly that the ratio of sodium borohydride to pulp is from 0.015% to 0.12%. Mansson does disclose that the amount of dithionite used is dependent of the original brightness and the desired improvement of brightness (col. 4, lines 11-14). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the application of chemical to the pulp. The motivation would have been to achieve the desired improvement of brightness (col. 4, lines 11-14).

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mansson as applied to claims 1 and 2 above, and further in view of Liebergott et al.

With respect to claim 8, Mansson does not disclose expressly that a chelant is added to the pulp slurry.

Liebergott et al discloses that a chelant is added to the pulp slurry (col. 2, lines 29-45 and col. 3, lines 2-13).

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add a chelant as described by Liebergott et al to the bleaching process of Mansson to obtain the invention as specified in claim 8. The motivation would have been that mechanical pulps are normally pretreated with organic chelating agents to remove naturally occurring trace metals (col. 1, lines 20-25).

With respect to claim 10, Mansson does not disclose expressly the time interval from mixing the chemicals to addition to the pulp. However, Mansson does disclose that dithionite solution is unstable (col. 1, lines 25-29), and that this disadvantage has resulted in an importance of in-situ preparation (col. 1, lines 40-43). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add the mixed chemicals to the pulp as soon as possible after mixing to obtain the invention as specified in claims 3, 5, and 10. The motivation would have been to reduce the losses of active substance (col. 1, lines 25-29).

With respect to claim 9, Mansson discloses that the ratio is from 4.9 to 19.8 (col. 1, lines 46-52 and col. 3, lines 38-47), which contains one specific point within the claimed range of 4 to 7.5 for claim 9.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 2 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, and 5 of copending Application No. 10/465,433 in view of Mansson. With respect to claims 1 and 2, Application '433 discloses a method for brightening virgin mechanical pulp (claim 5); said method comprising combining: sodium borohydride, sodium hydroxide, and sodium bisulfite; and adding output to an aqueous slurry of virgin mechanical pulp (claim 1); wherein a ratio of (moles bisulfite-moles hydroxide)/moles borohydride is from -29.4 to 14.4 (claim 3), which encompasses the claimed range of from 0 to 7.8 for claim 1 and the claimed range of from 4 to 7.5 for claim 2. Application '433 does not disclose expressly combining: (i) an aqueous solution comprising sodium borohydride and sodium hydroxide; and (ii) an aqueous solution comprising sodium bisulfite, in a chemical mixer. Mansson discloses combining: (i) an aqueous solution comprising sodium borohydride and sodium hydroxide (Mansson, col. 1, lines 46-52 and col. 2, lines 43-49); and (ii) an aqueous solution comprising sodium bisulfite (Mansson, col. 3, lines 21-35), in a chemical mixer (Mansson, col. 3, lines 47-50).

At the time of the invention, it would have been obvious to combine two aqueous solutions as described by Mansson in the brightening solution of Application '433 to obtain the invention as specified in claims 1-2. The motivation would have been that commercial sodium borohydride solutions are available that contain sodium borohydride

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and sodium hydroxide (Mansson, col. 1, lines 46-52) and sodium bisulfite solution is available to a low cost (Mansson, col. 3, lines 32-36).

This is a provisional obviousness-type double patenting rejection.

Claims 1 and 2 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/832,182 in view of Mansson. With respect to claim 1, Application '182 discloses a method comprising combining: (i) an aqueous solution comprising sodium borohydride and sodium hydroxide; and (ii) an aqueous solution comprising sodium bisulfite (claim 1), to an aqueous slurry of pulp; wherein a ratio of (moles bisulfite-moles hydroxide)/moles borohydride is from 0 to 25 (claim 2), which encompasses and contains one specific endpoint from the claimed range of from 0 to 7.8. Application '182 does not disclose expressly that the method is for brightening virgin mechanical pulp, or that the chemicals are mixed in a chemical mixer. Mansson discloses that the method is for brightening virgin mechanical pulp (Mansson, col. 1, lines 4-18), and that the chemicals are mixed in a chemical mixer (Mansson, col. 3, lines 47-50). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to mix the chemicals in a chemical mixer and use the method for brightening virgin chemical pulp, as described by Mansson, in the method of Application '182 to obtain the invention as specified in claim 1. The motivation would have been that when bleaching wood pulps, especially mechanical pulp, dithionite is used when a lower brightness is desired (Mansson, col. 1, lines 13-17), and to obtain as complete reaction of the borohydride as possible (Mansson, col. 3, lines 38-44).

With respect to claim 2, Application '182 discloses that the ratio is from 0 to 25 (claim2), which encompasses the claimed range of from 4 to 7.5.

This is a provisional obviousness-type double patenting rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,429,716 discloses a deinking composition comprising sodium bisulfite and sodium borohydride, with pH adjusted by sodium hydroxide, but does not disclose that the composition is used to brighten virgin mechanical pulp. Although this reference has been identified in the International Search Report as a Y reference, the references used in the current Office Action adequately supported rejections without using Patent '716.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Kinney whose telephone number is (571) 272-8388. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALK


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